

# **DRAFT**

Ref: 8EPR-SR

## **ACTION MEMORANDUM**

**SUBJECT:** Approval for a Time-Critical Removal Action at the Vasquez Boulevard/Interstate 70 site - Operable Unit 2, City and County of Denver, Colorado  
Site ID# 089R

**FROM:** Paula Schmittiel, Remedial Project Manager  
Superfund Remedial Response Program

**THRU:** Steve Wharton, Unit Chief  
Superfund Remedial Response Program

Laura Williams, Unit Chief  
Emergency Response Unit

**TO:** David A. Ostrander, Director  
Emergency Response and Preparedness Program

## **I. PURPOSE**

The purpose of this Action Memorandum is to request and document approval of the removal action described herein for the Vasquez Boulevard/Interstate 70 site - Operable Unit 2 (OU2 or Site), City and County of Denver, Colorado. This time-critical removal action will be conducted by the City and County of Denver (CCoD) pursuant to an administrative settlement agreement with EPA entered under the authority of Section 122 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. § 9622. CCoD plans to upgrade the High Street storm sewer to meet a 50 year flood capacity. This storm sewer traverses OU2, and it is estimated that this upgrade will require the excavation of substantial volumes of potentially metal impacted (lead and arsenic) soils in OU2. Once excavated, the soils, if contaminated, will be disposed off-site??. Conditions existing at OU2 present a threat to public health and the environment and meet the criteria for initiating a removal action under 40 CFR 300.415(b)(2) of the National Contingency Plan (NCP).

This removal action involves no nationally-significant or precedent-setting issues. This time-critical removal action will not establish any precedent for how future response actions will be taken, and will not commit the US Environmental Protection Agency (EPA) to a course of action that could have a significant impact on future responses or resources.

## **II. SITE CONDITIONS AND BACKGROUND**

Site Name: Vasquez Boulevard/Interstate 70 site - OU2

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Superfund Site ID (SSID):	089R
NRC Case Number:	
CERCLIS Number:	CO0002259588
Site Location:	Denver County, Denver, CO
Lat/Long:	
Potentially Responsible Party (PRP):	City and County of Denver
NPL Status:	Final July 22, 1999
Removal Start Date:	TBD: FY/Qtr
Incident Category:	Time-Critical Removal Action
Response Authority:	CERCLA

### **A. SITE DESCRIPTION**

#### **1. Removal Site Evaluation**

The Vasquez Boulevard/Interstate 70 site was listed on the National Priorities List (NPL) on July 22, 1999. Three operable units were identified. (See Attachment A.) OU2 covers the area of the Vasquez Boulevard/Interstate 70 site where the former Omaha & Grant Smelter operated. The Omaha & Grant Smelter facility operated from 1882 until 1903. A lead smelting process was employed at the facility to produce gold, silver, copper, and lead. The process involved the fusing of ore, fuel, and lime to form a melted product. As a result of this process, lead and silver would sink to the bottom of an iron chamber and the slag would float on the surface of the liquid metals. Although detailed information about the wastes from the smelting operations is not well documented, it is known that blast furnace slag was produced from the smelting operations. Ores, fuel, and flux were delivered by rail car directly to the furnace charging doors on the upper levels of the smelter. As the smelting operations proceeded, the intermediate products flowed downhill to a lower level. Smelter workers would run slag onto a dump and load bullion onto rail cars.

After closure in 1903, the smelter buildings were subsequently demolished. Sometime later, all of the slag, with the exception of any residual that could be buried under modern parking lots, was removed. Based on historic aerial photographs, all of the visible slag was removed by 1949.

The CCoD performed a remedial investigation (RI) for OU2 in 2009 and a feasibility study (FS) in 2010. Development of a proposed plan and record of decision for OU2 has been postponed until EPA completes an additional investigation of groundwater at OU2. This removal action is necessary to address potential releases of and potential worker exposure to hazardous substances that could occur at OU2 as the result of CCoD's planned storm sewer improvements through a portion of OU2. This construction will be conducted in areas of OU2 known to contain elevated levels of lead and arsenic in surface and subsurface soils.

Investigations at OU2 have identified the presence of levels of arsenic and lead in soil at

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concentrations above human health screening levels, and some of the highest levels, 1,400 mg/kg arsenic and 100,000 mg/kg lead, have been found at the north side of the Pepsi Bottling Company property where portions of the existing storm sewer system are located.

The Preliminary and Final Baseline Human Health Risk assessments for OU2 identified surface and subsurface soil as the potential media of concern and arsenic and lead as the chemicals of potential concern.

### **2. Physical Location**

OU2 is in an historic industrial area of Denver. OU2 encompasses the approximately 50 acres of the original Omaha & Grant Smelter facility and includes a portion of the Globeville Landing Park. OU2 is generally bounded by I-70 on the north, the South Platte River on the west, Brighton Boulevard on the east, and the southern boundaries of the Globeville Landing Park and the Pepsi Bottling Company property on the south.

Other than the South Platte River, there are no major surface water bodies within OU2. Drainage in OU2 is largely controlled by man-made features, such as ditches, roads and storm sewers, as the majority of OU2 is paved or covered by buildings. Surface water runoff is directed to the South Platte River.

### **3. Site Characteristics**

OU2 consists primarily of the southern portion of the Denver Coliseum property (that portion of the Coliseum property located south of Interstate 70), which is owned by the CCoD, the Forney Transportation Museum property along Brighton Boulevard, the Pepsi Bottling Company property along Brighton Boulevard, and various other commercial properties located along Brighton Boulevard. None of the current facilities or businesses within OU2 are known to be contributing to the release at OU2.

The historical land use at OU2 was primarily industrial and included smelting (1883 - 1903) and municipal waste incineration (1933-1945).

The current land use at OU2 is primarily commercial/industrial, with recreational use at a small portion of the OU located in the western corner immediately adjacent to the South Platte River at the Globeville Landing Park. The ground is largely covered by highways, building structures, and paved parking lots. Grassy or unpaved areas are rare and are mainly restricted to the western most portion of the OU at the Globeville Landing Park and some small areas at some of the commercial properties along Brighton Boulevard and 39th Avenue on the eastern and southern portions of the OU. The potential future land use of OU2 is multi-family residential, with the approximate size of the multi-family units ranging from 5 to 20 acres.

The land use surrounding OU2 is mainly commercial/industrial, interspersed with private

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residences, and with recreational land use along the South Platte River.

Other than assessments and investigations, no other removal actions have been conducted at OU2.

#### **4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant**

Investigations in OU2 found many areas where surface and subsurface soils contained levels of arsenic and lead above what was considered background levels: 15 mg/kg for arsenic and 400 mg/kg for lead. (See OU2 RI.) In particular, samples of soils along the route of the proposed increased capacity storm sewer show arsenic levels up to 1400 mg/kg and lead levels up to 100,000 mg/kg. Levels of arsenic and lead well above background levels show a release of a hazardous substance to the environment at OU2. Excavation of these metal contaminated soils pose the threat of additional releases of these hazardous substances to the environment.

Lead and arsenic are “hazardous substances” as defined by Section 101(14) of CERCLA, as amended, 42 U.S.C. § 9601(14) and in the NCP at 40 CFR Section 302.4. Adverse human health effects of these metals may include the following:

##### **Arsenic**

Large doses of arsenic may be acutely fatal to humans. Symptoms include fever, loss of appetite, enlarged liver and heart rhythm abnormalities. Sensory loss in the peripheral nervous system may also occur. Chronic exposure to arsenic generally results in skin lesions, liver injury and peripheral vascular disease. The peripheral vascular disease may progress to endarteritis obliterans and gangrene of the lower extremities (blackfoot disease). Arsenic is a human carcinogen based on observation of increased lung cancer mortality due to inhalation exposure and increased skin cancer in individuals exposed to arsenic via drinking water.

##### **Lead**

Lead is classified as a B2 carcinogen by the EPA. This classification is the result of sufficient animal studies determining that lead compounds are probable human carcinogens. Lead can enter the body via ingestion and inhalation. Children appear to be the segment of the population at greatest risk from toxic effects of lead. Initially, lead travels in the blood to the soft tissues (heart, liver, kidney, brain, etc.), then gradually redistributes to the bones and teeth where it tends to remain. The most serious effects associated with markedly elevated blood lead levels include neurotoxic effects, such as irreversible brain damage. Children have exhibited nerve damage, permanent mental retardation, colic, anemia, brain damage, and death.

#### **5. NPL Status**

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The Vasquez Boulevard/Interstate 70 site was listed on the National Priorities List (NPL) on July 22, 1999. A feasibility study focused on soils at OU2 was completed in 2010 by CCoD. Groundwater investigations are ongoing and are expected to be completed in 2015, with an OU2 proposed plan and record of decision to follow soon thereafter.

### **6. Maps, Pictures, Other Geographic Representations**

A map of the Vasquez Boulevard/Interstate 70 site including the OU boundaries is shown in Attachment A.

### **B. Other Actions to Date**

#### **1. Previous actions**

No previous actions other than described above have been conducted at OU2.

#### **2. Current actions**

No current actions other than described above are on-going at OU2.

### **C. State and Local Authorities' Roles**

#### **1. State and Local Actions to Date**

CCoD conducted a remedial investigation and feasibility study for OU2, which was completed in 2010. CCoD has also conducted additional sampling in OU2 in the last year in anticipation of the construction of the improvements to the High Street storm sewer. The State is the support agency for OU2 and has assisted EPA in oversight of the response actions at OU2.

#### **2. Potential for continued State/Local Response**

The CCoD will perform and fund the proposed removal action. The State will continue to be the support agency for response actions at OU2.

## **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The conditions at OU2 present a threat to public health and welfare and meet the criteria for initiating a removal action under Section 300.415(b)(2) of the NCP.

EPA has considered all the factors described in 40 CFR 300.415(b)(2) of the NCP and determined that the following factors apply at OU2:

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*Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*

The proposed storm sewer construction in OU2 will result in the excavation of substantial volumes of potentially metal impacted soils. If not excavated, handled, and disposed properly, the workers and other nearby human populations could be exposed to unsafe levels of arsenic and lead in these soils.

#### **IV. ENDANGERMENT DETERMINATION**

Actual or threatened releases of hazardous substances from OU2, if not addressed by implementing the response action described in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

##### **A. Proposed Actions**

###### **1. Proposed Action Description**

Develop and implement a hazardous materials management plan and workplan in accordance with the statement of work (SOW) attached to the Administrative Settlement Agreement and Order on Consent for Removal Action for excavation, handling, and disposal of metals contaminated soils during the construction of the storm sewer expansion and improvements within OU2.

###### **2. Contribution to Remedial Performance**

The proposed actions will contribute to and not interfere with potential remedial actions for OU2.

###### **3. Engineering Evaluation/Cost Analysis (EE/CA)**

This is a time-critical removal action; thus, an EE/CA is not required.

###### **4. Applicable or Relevant and Appropriate Requirements (ARARs)**

Removal actions conducted under CERCLA are required, to the extent practicable considering the exigencies of the situation, to attain ARARs. In determining whether compliance with an ARAR is practicable, the lead agency may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted. A table containing potential ARARs is included in Attachment B.

###### **5. Project Schedule**

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### **B. Estimated Costs**

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### **TOTAL REMOVAL PROJECT CEILING**

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### **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

A delay in action or no action will increase the public health risks to the local population and workers posed by the metals impacted soils at OU2.

### **VII. OUTSTANDING POLICY ISSUES**

This removal does not set a precedent or constitute a nationally significant issue.

### **VIII. ENFORCEMENT**

A separate enforcement addendum provides a confidential summary of current and potential future enforcement actions for OU2.

### **X. RECOMMENDATION**

This decision document represents a selected removal action for the Vasquez Boulevard/Interstate 70 site - Operable Unit 2, in the City and County of Denver, Colorado, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Conditions at OU2 meet the NCP Section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed removal action. This time-critical removal action will be funded by the City and County of Denver (CCoD) pursuant to an administrative settlement agreement with EPA. EPA's costs for this PRP-led removal action will be limited to project oversight, which will be subject to reimbursement.

**Approve:**

\_\_\_\_\_  
David A. Ostrander, Director  
Emergency Response and Preparedness Program

**Date:** \_\_\_\_\_

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**Disapprove:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**David A. Ostrander, Director**  
Emergency Response and Preparedness Program

**Attachments:**

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### **REFERENCES**

### **SUPPLEMENTAL DOCUMENTS**

Support/reference documents that may be helpful to the reader and/or have been cited in the report are located in the Administrative Record Files for the Vasquez Boulevard/Interstate 70 site at the Superfund Records Center for Region 8 EPA, 1595 Wynkoop Street, Denver, Colorado 80202, and are available for review by appointment.

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Attachment A

Site Map

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Attachment B

Applicable or Relevant and Appropriate Requirements